

REMARKS

Status of Application

In the Office Action mailed on May 16, 2007, elected claims 1-10 were rejected over a cited reference. Non-elected claims 11-20 have been cancelled. New claims 21-29 have been added.

Claim Amendments

Claims 1-4, 6 and 10 have been amended to more clearly define the exhaust gas treatment catalyst of the present invention. These clarifying amendments are to clarify that the layers are washcoat layers. Claims 11-20, which were previously withdrawn from consideration in response to a restriction requirement, have been cancelled. Claims 21-29, which include further limitations regarding the compositions of the first and second layers of the catalyst and the presence of sensors, have been added. Support for new claims 21-26 can be found at least at page 9: lines 28-32. Support for new claims 27-29 can be found at least at page 4: lines 17-27, page 5: lines 14-17, page 6: lines 4-13 and page 8: lines 25-33 of the original specification. Applicants respectfully submit that no new matter has been added.

Rejection Under 35 U.S.C. § 112

Claim 10 was rejected in the Office Action under 35 U.S.C. § 112 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Claim 10 has been amended to delete the language to which the Examiner objects and now recites that “the catalyst comprises at least two catalytic zones.” Hence, the rejection has been obviated.

Rejection Under 35 U.S.C. § 102

Claims 1-7, 9 and 10 were rejected in the Office Action as allegedly being anticipated under 35 U.S.C. § 102 by U.S. Patent No. 5,556,825 to Shelef et al. Shelef does not disclose each limitation of the catalyst defined by amended claim 1. Specifically, Shelef does not teach an exhaust gas treatment catalyst comprising a) a first

washcoat layer comprising substantially only at least one refractory metal oxide, b) a second washcoat layer comprising substantially only at least one oxygen storage component and at least one binder therefor or c) a third washcoat layer comprising at least one layer of one or more platinum group metal components supported on a refractory metal oxide support.

Shelef discloses an automotive catalyst system that consists of a single washcoat layer of material. The four coatings that are discussed (gamma-alumina, lanthana, oxygen storage material and catalytic material) are all present on individual particles contained within one washcoat layer. In contrast, the catalyst of the present invention comprises three distinct washcoats. As discussed at page 7, lines 15-33, applicants have found that by providing a catalyst with (i) a discrete first, i.e., bottom, layer comprising substantially only at least one refractive metal oxide, and (ii) a discrete second layer overlying the first layer comprising substantially only at least one OSC and at least one binder therefor, and (iii) providing at least one separate catalytic, i.e., a PGM component layer, a catalyst is produced wherein a significant portion of the OSCs are separated from the layers containing the bulk of the PGMs, relative to catalysts that contain OSCs and PGMs together in the same layer adjacent to the carrier and/or in the catalytic layers. As a result, the oxygen storage capacity of the exhaust treatment catalyst of the invention can be adjusted without negatively impacting the catalytic functions of the PGM component-containing catalytic layers, such as their hydrocarbon oxidation and light-off activities. In addition, the conversions of carbon monoxide and nitrogen oxides are not negatively unaffected. The catalysts according to embodiments invention are advantageously integrated into a variety of exhaust platforms that have different oxygen storage capacity requirements.

Shelef provides no teaching of applying the substances as different washcoat layers, and thus involves a very different structure than the claimed catalyst. In fact, Shelef teaches away from the present invention by teaching that all of the components should be contained on a single support in the same washcoat layer.

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Amendment
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Claims 2-10 and 21-29 depend directly or indirectly from claim 1 and are patentable for the same reasons. For at least these reasons, the rejection of claims 2-10 and 21-29 is respectfully traversed.

Rejection Under 35 U.S.C. § 103

Claim 8 was rejected in the Office Action as allegedly being obvious under 35 U.S.C. § 103 from Shelef. Shelef does not suggest an exhaust gas treatment catalyst comprising a) a first washcoat layer comprising substantially only at least one refractory metal oxide, b) a second washcoat layer comprising substantially only at least one oxygen storage component and at least one binder therefor or c) a third washcoat layer comprising at least one layer of one or more platinum group metal components supported on a refractory metal oxide support, as recited in claim 1. Claim 8 depends indirectly from claim 1 and is patentable for the same reasons. For at least these reasons, the rejection of claim 8 is respectfully traversed.

Reconsideration of the above-referenced patent application in view of the foregoing amendment is respectfully requested. Correspondence should continue to be directed to Chief Patent Counsel, BASF Catalysts LLC, 100 Campus Drive, Florham Park, New Jersey 07932. If any fees are due, the USPTO is authorized to charge Deposit Account No. 50-3329.

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Respectfully submitted,

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